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ABSTRACT

Developers of educational innovations often devote too little time and effort to planning an effective strategy for diffusing their innovation among practicing educators. Particularly important is the task of selecting an appropriate target group for initial introduction of the innovation. A variety of specific diffusion methods may be effective, depending on the nature of the target audience and the specific goal of the diffusion effort. Once a clearly defined goal has been selected and a desired target group for the diffusion effort has been specified, it is possible to methodically and objectively evaluate diffusion methods to identify the most effective strategy. If educational innovators proceed in this manner, their diffusion efforts are likely to yield much more positive results than is currently the case. (Author/JG)

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Utilizing Effective Diffusion Strategies

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Introduction

Cletus Ferment was convinced that his invention was a major breakthrough. Many people had toyed with a variety of charts, tables, and games in the past hoping to simplify for children the process of mastering basic multiplication and division facts. However, none of these previous efforts compares with the Ferment Multipartite Facto-Feeler for getting the job done. Children who used the Facto-Feeler on a trial basis in six Massachusetts elementary schools, attained and sustained a level of mastery of multiplication and division facts rather quickly with little apparent effort. Their performance reflected previous patterns of pupil response to Cletus' new arithmetic breakthrough.

During each trial use of the Facto-Feeler, Cletus made every effort to gather some kind of data pertaining to the childrens' facility with multiplication and division facts. In addition, he sometimes employed individuals to document the amount of time children actually spent with the Facto-Feeler. Armed with such supportive data, Cletus set forth to tell the world about his invention and to offer it for use with children at cost. Cletus Ferment was a most benevolent person.

Unfortunately, when Cletus Ferment decided to share his invention with others strategically situated to get it into the hands of children, he entered a labyrinth of unimagined woe. Mountains of competing products, tons of paper describing these products, armies of apathetic or indifferent educators, and more perils than could be imagined by the followers of Aeneas await Cletus in the labyrinth. More likely than not, the Ferment Multipartite Facto-Feeler will find its way into that great incinerator of lost hope before too many children become familiar with it.

I have known Cletus Ferment. I met him twenty years ago, fifteen years ago, five years ago, last year, last month, yesterday. I will meet him again next week, next year, a year from now . . .. Cletus always seems to be the same kind of person -- enthusiastic; industrious; concerned

about documenting the viability of his breakthrough, but not sufficiently skilled to do a credible job of documentation; anxious to get moving pronto; and, convinced that the pedagogical world will be a better place because of his effort. Cletus can be counted upon to slip on a banana peel en route to his goal, to sustain a mild concussion, to suffer a unique case of hyper-specific amnesia (which strangely blots out all recollection of his latest innovation communication effort), and to recover rapidly enough to repeat the cycle at least a few more times in his lifetime.

The Cletus Ferments I have known are too often pathetic figures. Futility eats away remorselessly at their schemes, their dreams, their very drive. Many of these individuals are destined to reflect repeatedly upon what might have been if only . . .. Many eventually come to accept a cultist belief that change for the sake of change is a desirable end as one way to justify their repeated failures. Such is the path of pathos.

This essay is dedicated to the Cletus Ferments of tomorrow. It offers hope for those individuals, who wish to communicate innovations like the Facto-Feeler to others strategically situated to profit from the innovation, by offering them alternative methods designed to facilitate the communication of innovations to desired target audiences. Specifically, strategies for selecting viable diffusion methods, for identifying and involving appropriate personnel in change undertakings, and for sustaining change undertakings until extensive utilization is realized, are featured.

Little, if any, new information is offered. Rather, information that is known to a fair number of persons is selected and recast in a manner that may encourage its usage by individuals who set out to deliberately modify the behavior of others. This recasting of information approximates

the formulation of a set of reasonable methods for diffusing innovations which may prove to be a marked improvement upon whatever strategies are currently in vogue.

NOTE: References throughout the essay to "individuals who wish to diffuse new practices, products, and ideas to targeted audiences" are meant to include such diverse roles as the actual inventor of an innovation, an innovator interested in opening up new territory for someone else's specific innovation, or a legitimist employed for the purpose of facilitating change within a prescribed environment. Methods of diffusion described can be utilized effectively by individuals representing each of these roles.

Identifying and Involving Appropriate Personnel in Change Undertakings

Most persons who wish to modify the behavior of others share a common fault; that is, they view individuals who comprise a targeted audience as being interchangeable parts, or alike for all practical purposes. Strategies selected for diffusing the good word about a new practice, product, or idea, reach all members of a targeted audience in a uniform manner. And theoretically, all recipients of such a message have an equal opportunity to respond to it. While these strategies may facilitate awareness or interest in an innovation, they fall far short if the aspiration for diffusion is to modify individuals' behavior in a meaningful way.

Further, the composition of a targeted audience makes or breaks an effort to modify educational practice. Given a set of people known for their ability to change educational practice meaningfully, chances are good that a desired modification in practice will occur. On the other hand, educators who still adhere to practices pioneered decades ago view encroachments upon this stability in about the same way a cotton farmer views the arrival of the boll weevil. A variety of diffusion methods will suffice when used with the former group; none are likely to prove effective with the latter group.

Since the universe of educational practitioners is more like the latter than the former group, individuals who wish to modify the behavior of these practitioners need to contemplate deliberate intervention plans. Perhaps the first of these deliberate interventions ought to be a judgement about conditions for change within a targeted audience. I would argue that the adoption of an innovation is partially a function of the positive

and negative prior states of the selected target audiences. Positive prior states are those aspects of the target system which would facilitate the adoption of an innovation (for example, prior history of successful change, receptiveness toward new ways of doing things, proportion of new staff members). Negative prior states are those aspects of the target system which would impede the adoption of an innovation (for example, prior history of stable educational practice, absence of new staff members, negative attitude toward new ways of doing things). Hence, the acquisition of some information about conditions for change within a target system is a requisite step which will result in a go: no-go decision before resources are committed to specific diffusion efforts.

It is not unreasonable to believe the work suggested above will serve as a macro-filter, eliminating some portion of the target audience. Given the remaining members of the earmarked population, the second deliberate intervention ought to be a rough classification of individuals into adopter categories like those suggested by Rogers and Shoemaker.* I would argue that the adoption of an innovation is partially a function of the extent of prior involvement of the target audience in positive innovation adoption activity. Innovation adoption is enhanced when a target audience includes an abundance of innovator, early adopter, and early majority types. Innovation adoption is retarded when a target audience includes an abundance of late majority and laggard types. Hence, the acquisition of some information about the prior innovation adoption behavior of members of a target audience will feature individuals worth pursuing and will filter out individuals

*Everett Rogers and F. F. Shoemaker, Communication of Innovations, New York: Macmillan, 1971, p. 182. The authors recognize five distinctive innovation adopter categories: (1) innovators, (2) early adopters, (3) early majority, (4) late majority, and (5) laggards.

who are poor risks.

Given a set of innovator, early adoptor, and early majority types situated in an educational setting which has a history of receptivity to new practices, products, and ideas, the third deliberate intervention ought to be a classification of individuals according to position responsibility and colleague status within specific educational settings. I would argue that the adoption of an innovation is partially a function of the position and status of involved members of a target audience. Innovation adoption is enhanced when a targeted audience includes persons who enjoy position and colleague status. Innovation adoption is retarded when these persons are not among members of a targeted audience. Hence, the acquisition of some routine sociometric information about the nature of human interaction patterns within targeted audiences will highlight those individuals who enjoy both position and colleague status.

The thought of acquiring a variety of demographic and sociometric information about a targeted audience prior to initiating any diffusion work may, at first, appear formidable. It shouldn't; as an on-site visit, a small number of interviews, and the collection of some survey data, may prove to be an inexpensive way to pre-judge the likelihood of success there. In the absence of these data, innovators must advance blindly. That alternative guarantees many stubbed toes, bruised noses, and diminished self-confidence.

Selecting Viable Diffusion Methods

Ronald Havelock, in Planning for Innovation, has attempted to simplify the knowledge diffusion and utilization process by use of the communication formula: who says what to whom by what channel to what effect for what purpose.* Within the field of agriculture, for example, this formula could be stated: who (agricultural researchers and developers) says what (hybrid seed corn) to whom (corn producing farmers in the United States) by what channel (the many facets of the Cooperative Extension Service, plus seed manufacturers and retailers) to what effect (increasing corn yield) for what purpose (increasing farm income directly and the nation's food supply indirectly). This formula provides a point of departure for tackling the general problem of diffusing new practices, products and ideas to earmarked targeted audiences through use of the most efficient communication alternatives available.

Three specific tasks, relevant to the general problem are discussed:

1. Identifying communication methods typically used to reach each targeted group;
2. Clarifying aspirations for an anticipated diffusion undertaking;
3. Establishing criteria which will serve to highlight optimum methods for diffusing innovations to targeted audiences.

Whereas all components of the Havelock formula can be related to selecting appropriate diffusion methods, only those which pertain to the three tasks

*Ronald Havelock, Planning for Innovation, Ann Arbor, Michigan: CRUSK, Institute for Social Research, 1969, pp. 1-11.

will be amplified in this essay.

The following list encompasses diffusion methods typically used to reach targeted audiences:

1. Workshops and institutes
2. Periodic meetings
3. Printed matter
4. Other media forms
5. Demonstration
6. Consultant format
7. Formal training
8. Designated jobs/positions
9. Informal contact

These methods are apt to be drawn upon in a most unsystematic manner by innovators and/or change agents who aspire to modify the behavior of individuals in some manner.

Let us assume an innovator intends to diffuse a new product to members of a designated targeted audience. The aspiration for this effort is adoption. The communication method selected initially is printed matter -- descriptive brochures mailed to prospective target audiences. The effect of the mailing amounted to some awareness and interest in the product, but no perceivable influence upon practice. So, the mailing is augmented by a follow-up visit from a field agent to ten percent of the recipients. The effect of the combined mailing/selected contact strategy was noted as greater, in that prospective users initiated trial tests of the program. Little change in practice occurred, however. Finally, the innovator discards previous dissemination approaches in favor of a packaged, multi-media demonstration. This package is displayed in the corridors of classroom buildings on selected campuses. The effect of this effort was some increased adoption of the training program.

Here is a representative example of how innovators proceed to diffuse an innovation. Such an effort amounts to trial-and-error decision-making,

Which proves to be both frustrating and costly. If resources are infinite, this decision-making pattern may eventually produce results. Given limited resources, this decision-making pattern can be counted upon to prematurely age the innovator. Most innovators do not have access to unlimited resources; hence, there exists an obvious need for employing more fruitful methods.

The innovator's task at this point is to clarify aspirations for the anticipated diffusion effort. That is, what effects upon practice are sought? Target audience awareness and/or interest in a new practice, product, or idea constitutes one outcome. Stimulating the initiation of a study of the innovation constitutes a second. Stimulating the initiation of an on-site pilot test of the innovation constitutes a third. Whereas, a fourth coutcome would be the partial or extensive adoption of the innovation. Once the diffusion aspiration is clarified, the next task is to figure out which of the nine options listed above will best get the job done.

When awareness or interest in an innovation is a desired goal, minimal formal preplanning is needed to attain the goal. Many alternate methods will accomplish the task. More deliberate preplanning is demanded if systematic study or a pilot test of an innovation is desired. Not all of the communication methods mentioned are suited to the realization of these ends. When the desired end of a diffusion effort is adoption, much deliberate preplanning is required. I would argue that the adoption of an innovation is partially a function of the amount of effort invested to identify -- then utilize -- optimum methods for diffusing specific innovations to target audiences.

When the aspiration for a diffusion undertaking is study, a pilot test, or adoption -- as in the above illustration -- simply knowing about communication channels typically used to reach targeted audiences isn't sufficient. Knowledge of the relative advantages of each alternate method becomes an important pre-requisite to effective decision-making. And relative advantage is a function of pre-determined criteria which prescribe limits for a diffusion undertaking.

Criteria for selecting appropriate diffusion methods will vary from one situation to another. This variation is related to the unique nature of innovations, to the purposes for the diffusion effort, to the size and sophistication of a targeted audience, to available resources, and so forth. For this reason, no one set of criteria will satisfy all diffusion needs. Those who contemplate a diffusion undertaking need to analyze their "license to perform" for clues that infer criteria.

Let us assume that Cletus Ferment -- remember him? -- is not like most of the set of contemporary educational innovators. Since he wishes to get his Multipartite Facto-Feeler into the hands of children, his diffusion goal is adoption. Since he has limited resources to invest in a diffusion undertaking, Cletus decides to carefully weigh alternate diffusion strategies in light of these resources and his goal. He decides upon (1) personal contact in a school setting with (2) small groups of educators (3) who have a history of taking risks and (4) who have access to funds needed to purchase instructional materials. Cletus has thus set four criteria, and now needs only to use them to select the diffusion method or methods best suited to accomplish his goal.

Among options worthy of his consideration are interaction with selected individuals in designated jobs/positions (such as elementary mathematics

supervisors), interaction with selected individuals who are invited to observe a demonstration of the Facto-Feeder in a school where it is in use, or interaction with selected individuals attending a brief workshop, institute, or periodic meeting. Options not apt to fulfill his needs are printed matter, various media forms, extended formal training structures, the consultant format or informal contact. The second of the three possible positive options may be best suited to his resources and aspiration.

Figure One summarizes salient dimensions of the strategy described above for those who are interested in probing into its possibilities. Once criteria are identified, the goal of a diffusion undertaking is determined, and the desired audience is specified, it is possible to evaluate each of the alternate diffusion methods in a reasonably objective, detached manner. If individuals, who are responsible for worthy new practices, products, or ideas, proceed in the manner suggested, it is not unreasonable to believe their efforts will yield many more positive outcomes than is currently the case.

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RATING ALTERNATE DIFFUSION METHODS

Diffusion Methods	Criteria	Goal of Diffusion					Targeted Audience					
							Innovators and Early Adopters		Early Majority		Late Majority	
		Awareness	Interest	Study	Pilot Test	Adoption	+	-	+	-	+	-
1. Workshops and institutes	To be determined											
2. Periodic Meetings	To be determined											
3. Printed Matter	To be determined											
4. Other media forms	To be determined											
5. Demonstration	To be determined											
6. Consultant format	To be determined											
7. Formal Training	To be determined											
8. Designated jobs/position	To be determined											
9. Informal Contact	To be determined											

NOTE: The + and - symbols included under the category "targeted audience," once checked-off, provide a tidy overview of the efficacy of each diffusion method in relation to the three targeted audiences.

Sustaining Change Undertakings

When individuals, who wish to diffuse an innovation to a targeted audience, expend the extra effort required to identify and involve appropriate personnel and to select potentially viable diffusion methods, they deserve a good turn from the Bird of Paradise. While adoption cannot be guaranteed as a consequence of their extra effort, if the innovation is worthy the likelihood of its adoption is certainly enhanced. There are several additional strategies which, if utilized, will further increase the likelihood of adoption.

The first strategy pertains to ascertaining a need for the innovation within the targeted setting. An assumption is made that the development of the new practice, product, or idea emanated from an unsatisfied need of a set of educators very much like those in a targeted audience, and that the innovation fulfills the unsatisfied need in some obvious way. If this assumption is violated, the value of an innovation must remain a mystery both to those responsible for its diffusion and to those adopting it. Given a valid assumption, it is incumbent upon diffusion agents to confirm that a similar need exists among members of a targeted audience.

Undoubtedly, the resources available to conduct a needs assessment of a targeted audience will dictate whether such an assessment occurs and whether it is a simple or a complex undertaking. I would argue that the adoption of an innovation is partially a function of the acquisition of needs assessment information. The information sought should be sufficient to facilitate decision-making about diffusion plans. If data suggests full speed ahead, then, there is every reason to believe the undertaking

will survive usual pitfalls encountered in the course of attempting to modify educational practices. These are the pitfalls that typically bring about the abortion of diffusion efforts.

Let us assume Cletus Ferment decided upon the second of the diffusion options worthy of his consideration. You may recall this method involved interaction with selected individuals who are invited to observe a demonstration of the Facto-Feeler in a school where it is in use. After these individuals are designated by Cletus but prior to offering them an invitation to attend the demonstration, Cletus has an opportunity to gather needs assessment information from selected members of the group. He might conduct random telephone interviews, visit certain schools, or construct and mail a questionnaire to randomly chosen individuals in order to obtain the desired information. How he obtains the information isn't as important as actually possessing it, for the information will further confirm or raise questions about the path of his industry.

The second strategy pertains to generalizing the diffusion of an innovation beyond the originally targeted audience. If strategies outlined throughout this essay have been employed, the initial diffusion effort focused upon reasonably innovative individuals who enjoy both position and status within an educational hierarchy. This group constitutes a prime resource for extending the diffusion undertaking to individuals not likely to be reached by change agents who are external to given contiguous groups.

I would argue that the adoption of an innovation is partially a function of the ability of individuals, who are initial recipients of a diffusion undertaking, to successfully sustain the momentum of such an effort by extending it to the practice of less innovative members of their

collegial group. Procedures for accomplishing this task will vary from one situation to another.

For example, the initial recipient may personally draw upon friendships, offer demonstrations at the request of interested colleagues, or formally speak in behalf of a new practice, product, or idea. This person may assume responsibility for bringing together a change agent and members of the "late majority" in his or her educational setting. Or, this person may arrange to take a group drawn from the "late majority" to another location to observe a demonstration of the innovation of interest. Whatever, the initial recipient commands an array of options, and this person knows the idiosyncrasies of people who might become involved.

It can be seen, then, that effective diffusion undertakings encompass a two stage process. The first stage focuses upon involving a set of individuals who are known to modify their educational practice routinely. These targeted individuals assume responsibility for extending the diffusion of an innovation to their collegial group during stage two.

Summary

To recapitulate, I would argue that the adoption of an innovation is partially a function of:

1. the positive and negative prior states of the selected target audiences;
2. the extent of prior involvement of the target audience in positive innovation adoption activity;
3. the position and status of involved members of a target audience;
4. the amount of effort invested to identify -- then utilize --

optimum methods for diffusing specific innovations to target audiences;

5. the acquisition of needs assessment information;
6. the ability of individuals, who are initial recipients of a diffusion undertaking, to successfully sustain the momentum of such an effort by extending it to the practice of less innovative members of their collegial group.

I offer the above to individuals who wish to diffuse new practices, products, and ideas to targeted audiences, because I believe these considerations will help them successfully modify some aspect of educational practice.